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# **Nurses in Canadian Primary Health Care Settings**

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**Phyllis E. Jones**

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**Literature Review Monograph 2**

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## LITERATURE REVIEW MONOGRAPHS

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# Nurses in Canadian Primary Health Care Settings

A Review of Recent Literature

Phyllis E. Jones, B.Sc.N., M.Sc.

Literature Review Monograph 2

ISBN 07727-3601-4  
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## FOREWORD

*Nurses in Canadian Primary Health Care Settings* is the second in this monograph series on health care topics. In the words of the author, Dean Phyllis Jones, it arose directly from "an examination of the literature for the purpose of better understanding the present state of and future direction for nursing in this sector of the health care system." The publication of this work is particularly appropriate at present as nurses are continuing to investigate new patterns of care.

The original literature review was carried out for a series of research projects on the nurse in primary care. Since the time of her early studies the author has re-examined the literature and up-dated the review to include reported work from 1966 to 1980. The literature discussed mirrors the intense interest in the role of the nurse in primary health care particularly during the late sixties and early seventies. Placed in the context of similar studies from the United States and Britain a unique Canadian component can be identified.

The issue of the role of nurses in Canadian primary health services was first raised in a series of government reports that, in the main, viewed the nurse in the role of "physician extender" in general medical care. Closely associated with these reports were the early studies demonstrating different organizational patterns for nurses working in primary care settings. From these emerged a ground swell of interest which gained momentum and resulted in many further studies and demonstration projects in both education and service. From the beginning, however, two differing views were expressed about the role of the nurse in primary health care: nurses extending or replacing physicians' services and nurses focusing on a uniquely nursing role. There are indications in the present literature review that as time passes there is a trend toward studies that will contribute to a better understanding of the unique contribution of nursing.

During the late sixties and seventies the goal of providing health care for all citizens can be seen as one part of a much larger social movement, the right of access for all citizens to professional services, particularly in fields such as primary health care, legal counselling and social work. Documentation of all phases of this development will be of interest to both professional and social historians and it is important to preserve a record of the role of the nurse as an integral part of this movement. By studying the past and examining the present, educators, practitioners and planners prepare for the future. It is hoped that this monograph will facilitate such work.

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## INTRODUCTION

The late 1960s and early 1970s were marked by a multitude of governmental studies of health care systems in Canada. Following the landmark Royal Commission on Health Services (Canada, 1964), most of these studies of various aspects of health care arose from concerns about escalating costs of health care services and many reports reflected a growing recognition that hospital and physician services, even though of high quality, cannot meet all the health care requirements of the population. Consequently, reports of these studies frequently identified primary care as the service sector and nurses as the professionals with potential to contribute in new and different ways to health care. Recommendations with clear implications for nurses in the primary care sector can be found in reports both national (Canada, 1970; Canada, Department of National Health and Welfare, 1969, 1971, 1972; College of Family Physicians of Canada, 1971; Crichton, 1972; Economic Council of Canada, 1970; Hastings, 1972) and provincial (Ontario Committee on the Healing Arts, 1970; Ontario Council of Health 1973, 1974a, 1974b, 1975, 1976; Ontario Department of Health, 1970a, 1970b; Ontario Ministry of Health, 1973a, 1973b; Quebec, 1971).

At the same time, many studies involving nursing roles in primary health care have been undertaken and reported. These observations prompted an examination of the literature for the purpose of better understanding the present state of and future directions for nursing in this sector of the health care system; the results of that literature search are discussed in this paper.

Included in the review are published materials including journal articles, reports and books which:

- derive from research, demonstration or experience in Canada;
- focus on nurses' roles and functions;
- are based in primary health care (mainly ambulatory) settings;
- are written in English.

Although the Canadian focus precluded consideration of the literature on similar developments in other countries, some comparisons are briefly noted in the Discussion, with reference mainly to focus of interest, type of setting and organization in projects described in a number of reports originating in the United States and Britain.

For purposes of this review primary health care was considered to be a sector of care which "includes not only those services that are provided at first contact between the patient and the health professional, but also responsibility for promotion and maintenance of health and for complete and continuous care for the individual, including referral when required" (Ontario Ministry of Health, 1973a, p. 11). Other definitions of primary health care from a multiplicity of sources might have been chosen. These

commonly include the idea of

- first contact with, or point of entry to, the health care system;
- ongoing, or continuing care;
- promotion and maintenance of health as well as diagnosis, treatment and rehabilitation.

Many definitions equate primary health care with primary medical care. Use of the above definition permits a more inclusive view of primary health care, as in Hansen (1970), as a level (or sector) of health care services in concert with secondary and tertiary health care (acute care and specialty hospitals), rather than a specific type of service. As Hansen points out, the margins between these sectors cannot be considered as precise and firm. For example, primary health care cannot be considered as synonymous with ambulatory care but *most* primary health care services would be provided on an out-of-hospital basis while *most* tertiary care services would be based in specialty hospital. Figure 1 is an attempt to depict visually these three sectors of health care. The literature included in this review is related to the primary care component in Figure 1.

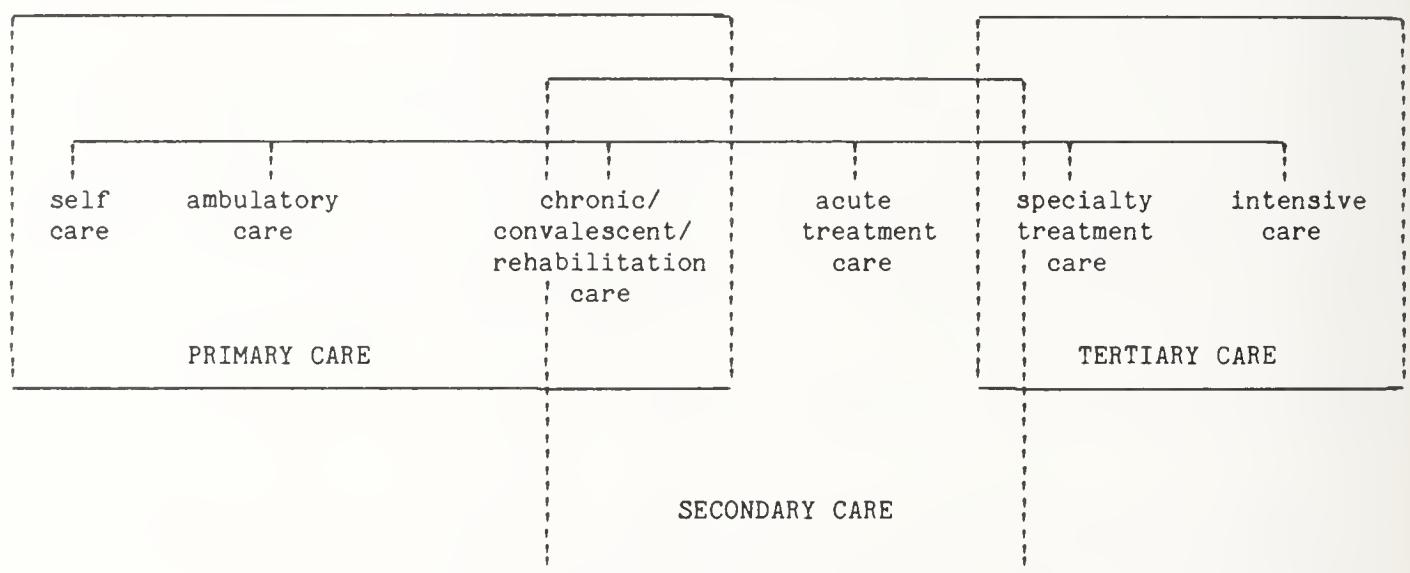


Figure 1. One model of the sectors of health care services.

Using the above criteria and definition, more than 80 items appearing between 1966 and 1980 were found. While most of these were based on projects in medical care settings, eight articles reported investigations in community nursing settings. Therefore, following some general observations pertaining to this body of literature, examination of the reports is organized according to these two major types of study setting: primary medical care and community nursing setting. An attempt is made to further sub-group the reviewed literature according to research approach or focus: time/activity of professionals; workload of the nurse; practice productivity and utilization; patient satisfaction; professional satisfaction; quality of care and patient outcomes. This review is followed by discussion of the major thrusts of the literature and the implications for nurses.

While the volume of literature in the period was great, findings were inconclusive. A great deal still needs to be done to explore the potential

for nursing in the primary care sector. It is hoped that the present overview may be of use in identifying sources in the literature in relation to specific aspects of the problem, and at the same time in pointing up ambiguities in the concepts and criteria of importance for future work.

## GENERAL COMMENTS ABOUT THE LITERATURE

Reports were variable, ranging from experiential descriptions to reports of controlled experiments. Methods generally included one or a combination of two or more of the following: participant description of experience, observation of professional activities, interview with professionals and/or patients and monitoring of service records.

In large part, the literature is a product of the 1970s. Prior to 1971, reports were few (Day, Barret, Craig & Woods, 1969; Hutchison & Mumby, 1970; Jones, 1969; Mossing, 1966); these described projects which demonstrated two organizational modes which have been pursued in ensuing projects. The earliest reported a project undertaken in Prince Albert, Saskatchewan, from 1962 to 1966, where a nurse, described as a correlator of total patient care, was employed by a seven-doctor group practice (Mossing, 1966). A second mode of organization, i.e., seconding health department-employed public health nurses to private general medical practice, was described by Day et al. (1969), Hutchison and Mumby (1970) and Jones (1969).

Commencing in 1971, reports began to appear with increasing frequency, from 9 in 1971 to 13 in 1976. This increase was in part a reflection of the development of primary care units in academic medical settings. The increase also reflected the establishment of short nurse-education programs with their associated evaluation. Preparation of nurse practitioners was reaching its peak (Imai, 1974), stimulated and supported by official interest in this type of health worker (Canada, Department of National Health and Welfare, 1971, 1972; Robertson, 1973). The term *nurse practitioner* was originally defined as "a nurse in an expanded role oriented to the provision of primary health care as a member of a team of health professionals relating to families on a long-term basis" (Canada, Department of National Health and Welfare, 1972, p. 5). A number of these short educational programs were described at varying stages of development (Bain, Cahoon & Jones, 1975, 1976; Crawford, 1974; Jones, 1975; LaPerriere, 1972). As a result of a national survey, Imai (1974) drew attention to the wide variation in these short programs: in admission requirements, in length and in curricula. On the whole, establishment of these short courses for graduate nurses has been discontinued. In their place the baccalaureate nursing programs have included the required learning experiences (Imai, 1974) as recommended by the Boudreau Committee (Canada, Department of National Health and Welfare, 1972, p. 14) and supported by the Canadian Nurses Association and Canadian Medical Association (*Canadian Medical Association Journal*, 1973; *Canadian Nurse*, 1973).

While education is not the focus of attention in this review it should be

noted that in two institutions, McMaster University in Ontario and Memorial University of Newfoundland, these short educational programs to prepare nurses for primary care services formed the base for multiple studies of their impact. The McMaster University group reported widely regarding the effect on various aspects of the practice settings of nurses who had completed a specified course of instruction (Sackett et al., 1974; Spitzer, 1976,; Spitzer, Kergin et al., 1973; Spitzer, Russell & Hackett, 1973; Spitzer, Sackett et al., 1974; Sweeny & Hay, 1973). This instruction was described as four months of study/practice and two months of internship in which physicians acted as preceptors (Kergin & Spitzer, 1972, 1975; Kergin et al., 1973; Spitzer & Kergin, 1973).

The group of researchers at Memorial University has also reported widely (Black, Riddle & Sampson, 1976; Chambers, 1979; Chambers et al., 1977; Chambers et al., 1978; Chambers, Suttie & Summers, 1974; Chambers & West, 1978a, 1978b) on their studies of the impact on Newfoundland medical practices of employing nurses who were required to undertake the specified educational program described by Agnew (1974) and by Chambers, Suttie and Summers (1974).

The findings of the various studies by the McMaster and Memorial groups are treated in subsections of this paper according to the aspect of the problem under review along with findings of other studies which examine the same area of concern.

## REPORTS FROM MEDICAL CARE SETTINGS

Some reports consist of descriptions in general terms of the experiences of the participants or of the innovations introduced. For example, McMurray et al. (1971) described the work of four nurses with well children attending McMaster Family Practice Unit. Brown (1974) provided an account of her involvement in the development of a community health centre designed to provide health services for a medically underserviced rural community adjacent to University of Western Ontario. Involved in a three-year research project reported later by Charter, Grasset, Ledgerwood and Clarke (1975), Grasset (1974, 1975) described in anecdotal terms her work as the project nurse employed by Victorian Order of Nurses and attached to a family practice medical group. Case material is used to illustrate description of the author's nursing activities. One report (*RNAO News*, 1979) was based on an interview with three nurse practitioners who described their work in an adolescent medicine clinic, in a university family practice team and in a private paediatric practice. Nelles (1979) described her work as a nurse practitioner in a community college health clinic with a part-time staff physician. Cherezekoff and Aldred (1972) reported the objectives of, the preparations for, and the achievements of the introduction of a "family practice nurse" into a family medical practice in Vancouver.

Two such descriptive reports included data on patient numbers and characteristics. Rosser and Barrie (1972) briefly described a family physi-

cian unit and reported the activities of a public health nurse assigned full time to the unit. During the four-month period under study 2,655 patient visits to physicians occurred and of these 91 were referred to the public health nurse. The authors described the benefits to patients in terms of improved communication among physician, public health nurse and health unit. From a Kitchener, Ontario family physician practice, Bryant, Brown, and Stacey (1976) reported on one year's experience of attachment of a public health nurse employed by a health unit: her role and functioning, the selection of referrals and doctor-nurse communication patterns. During the first year of the attachment arrangement there were 108 referrals to the nurse and these were reported according to the referral classification used by the health unit. Advantages of this type of arrangement to doctor, public health nurse and patient were cited.

From an isolated nursing station in Labrador, Graydon and Hendry (1977) described their 356 patient contacts during a two-month period. Patients seen in the clinic (306) were classified in terms of the care required, as were those who required nursing care in their homes.

With little exception these authors stated that inter-professional communication is improved and care to patients is better co-ordinated although no data were provided to support this view.

### *Time and Activity Studies of Practice*

A number of investigators have used varying forms of activity or time/activity studies as a method of gathering data to describe the work of nurses in association with physician services. Variations in definitions and methods preclude the possibility of comparing the results.

Hunter and Clark (1971) described the self-reported procedures performed by four registered nurses for 2,243 patients seen during three weeks in a London, Ontario family medical centre. During the study period there were 1.8 nurse procedures per patient seen by the doctor; of these, 47 per cent were office procedures and 53 per cent were telephone activity. Jones and Bene (1971) analyzed a sample of time and activity self-reported by a baccalaureate nurse employed in a downtown Toronto family practice unit and reported 66 per cent of the nurse's time spent on patient care activities.

Winter and Last (1974) used a self-completed diary and questionnaire to gather data regarding the activities and role perceptions of 126 nurses employed in doctors' offices in the Ottawa area; the mean percentage of their activities that were nursing duties was 26 per cent and almost 20 per cent of the sample spent their entire work week in clerical and other activities. Hendry and Mowat (1978) reported the distribution of time of a nurse practitioner in a private paediatric practice, documented by the nurse for the first year of practice. Activities were classified as office management (29.8 per cent), patient care (25.8 per cent), follow-up (13.2 per cent), liaison (11.5 per cent), health education (10.2 per cent), assessment and management (9.5 per cent).

Smale (1971) analyzed time and activities of 5 nurses and 5 physicians

observed in a sample of patient visits to a university clinic, a group of 5 medical practices; physical tasks alone constituted 30 per cent of all observed nursing activity. In a comprehensive study of activities of nurses in 50 family practice settings, Kergin and associates (Kergin, Yoshida & Tidey, 1972) found that observed activities related to patient care occupied about one-third of nurses' time; the remainder was spent in activities described as practice-centred, personnel-centred or telephone-centred. This study was designed to provide base line data for a number of ensuing studies by the McMaster group. From a later survey of 99 nurses and 79 associated physicians who participated in the first five years of the McMaster educational program for family practice nurses, Scherer, Fortin, Spitzer, and Kergin (1976, 1977) reported that nurses' time spent in patient care activities increased by 105 per cent following the course, while their time in clerical and housekeeping duties decreased by 42 per cent.

### *Workload of the Nurse*

In some investigations, analysis of nursing caseload provided comparison with a variety of population characteristics. Again, variation in approach precludes the possibility of comparison among studies.

In a pilot study, Day and colleagues (1969) documented efforts at collaboration between a family physician in private practice and a public health nurse employed by a health department in terms of percentages of patients deemed by the investigators to be suitable for nursing service; 4 per cent of 230 patients seen by the doctor were considered suitable for referral to the nurse.

In an urban family practice department where community nurses were attached, Jones (1971) compared the nursing caseload (288 patients) to the population served on a number of demographic characteristics. Although only 14 per cent of the area population was 65 years of age and over, 57 per cent of the nursing caseload was made up of this age group. Szasz (1972) described the attachment of a Victorian Order Nurse to a group of family physicians. Selected characteristics of the nursing service (such as number and length of visits, travel, etc.) were compared with the regular Victorian Order of Nurses service; although the Nurse Associate made fewer visits than regular staff, closer communication with patients and more complete assessment of their needs was reported.

Milne, Buchan, and Williams (1973) presented data regarding the public health nursing service given to 341 patients attending a family medical centre in London, Ontario over an 18-month period. This sample was described according to selected demographic variables (age, socio-economic status and family status), nursing variables (reason for referral, source of referral, intensity and length of public health nurse supervision); and analysis of relationships between variables was shown. The investigators concluded that addition of public health nursing service to a family medical centre increases the cooperation in planning and providing health care and that "the result of this cooperative effort is more

comprehensive, continuous, and consistent health service to the patient and his family" (p. 106).

### *Practice Productivity and Utilization*

Using a variety of definitions and measures, various investigators have examined the productivity of the medical practice following the inclusion of nursing service.

Szasz (1972) reported no significant effect on the pattern of practice of one group of physicians. On the other hand, from a study of changes in the workload of doctors and nurses in five family practices following the introduction of nurse practitioners, Lees (1973a) reported a mean time saving for physicians in unit patient services of 18.2 per cent.

From the McMaster studies, Sweeny and Hay (1973) reported an increase of 22 per cent in practice output as measured by numbers of families added to the practice in the year following introduction of the nurse practitioner. In the St. John's randomized trials, investigators at Memorial University, Newfoundland (Black, Riddle & Sampson, 1976; Chambers & West, 1978a) found that practices employing family practice nurses had a mean increase of 14 per cent between 1975 and 1976 in the number of patient services compared with a 9 per cent increase for all physicians in the province (Chambers & West, 1978a).

Effect on financial performance of medical practices employing nurses as "physician extenders" has been the focus of some study, notably by the McMaster and Newfoundland trials. From preliminary findings of the first year of the Southern Ontario Trial of the Nurse Practitioner in 12 private medical practices, the McMaster group concluded that, in comparison with conventional practices, family medicine practices employing nurse practitioners were not adversely affected financially (Spitzer, Russell & Hackett, 1973). However, complete findings which compared before-after financial performance of the control and experimental medical practices revealed a decline in physicians' income with the employment of nurse practitioners (Spitzer, Hackett & Russell, 1974; Spitzer, 1976). Chambers, Suttie, and Summers (1974) also reported data from six family medical practices in urban centres in Newfoundland employing nurses on an experimental basis. They showed a loss of income in four of the practices. These financial disadvantages are attributed to the combined effect of two modes of payment: fee-for-service for physician services together with the salary for nursing services.

The impact of the introduction of nurses on other health services utilization has been reported by some investigators. Among the findings of the Vancouver project, Charter and associates (1975) suggested that the length of hospital stay may be shortened and hospital admission of some patients avoided by nursing intervention as part of the services provided by primary health care teams. From an investigation of the effects of adding a nurse to a rural medical practice, Ames (1975) reported an estimated saving of \$60,939 in hospital and institutional days

during the two study years, suggesting that length of hospital stay may be shortened and hospital admission of some patients may be avoided by inclusion of nursing intervention in a team approach to the primary health care. A before-after comparison of rural Newfoundland communities with and without "expanded role nurses" showed that acute-care days in hospital decreased 5 per cent in the experimental group (those with expanded role nurses) and increased 39 per cent in the control group; annual health service cost per 1,000 persons increased 26 per cent for the experimental group and 21 per cent for the control group (Chambers et al., 1977).

The McMaster group has reported the development of a method to derive indices of health services utilization and hence health care costs (Spitzer, Roberts & Delmore, 1976a). This index, the Composite Index of Health Care Costs, is said to reflect "actual expenditures both in the total amount and in various categories" of health care costs (Spitzer, 1976, p. 226). Use of this method was reported by Spitzer, Roberts and Delmore (1976b) and substantial reductions in this index were shown in the experimental group. Spitzer (1976) further reported "an 11 per cent reduction of total costs of services used by the patients of the practice" (p. 226) and suggested that a shift from hospital-based to ambulatory services had occurred during the experimental period involving employment of the nurse.

### *Patient Satisfaction*

Patient acceptance of innovation in the arrangement of services was examined in many of the studies reviewed and in most cases was found to be high. To provide data prior to introducing innovations, the McMaster group in 1971 conducted a household survey in which they interviewed 1501 individuals from a rural population not previously exposed to nurses in a primary care role (Chenoy, Spitzer & Anderson, 1973); responses indicated that they would readily accept nurses in this role. A second survey was conducted two years later (1973) after the introduction of the family physician-nurse practitioner unit. Comparison of the responses of 686 adults interviewed at both times (1971 and 1973) showed little change in attitudes toward nurses in a primary care role in this setting (Batchelor et al., 1975). In the second survey, 97 per cent of patients in the conventional group and 96 per cent in the nurse practitioner group reported satisfaction with services received during the study period (Spitzer, Sackett et al., 1974).

A community survey of 433 households in Hamilton's North End included investigation of the acceptability of nurse practitioners as primary care providers. Over half of those interviewed indicated that they would accept treatment or advice from a nurse for common conditions (Vayda et al., 1974).

Greenhill and Grace (1972) measured the attitudes of patients toward the health team approach to care by physician, social worker and public health nurse and found patients to be satisfied with the service. With a

sample of 199 families MacKay investigated the role of a baccalaureate nurse as associate of the paediatrician in a family care unit and compared the group of patients receiving nursing service with a similar group receiving only physician services as to patient acceptance (MacKay, 1971; MacKay, Alexander & Kingsbury, 1972, 1973); the nursing service provided in this newly defined role was found to be acceptable by patients (1973). A high level of satisfaction was also found by Jones, Lindsay, and Stein (1972; Jones 1972) among 100 interviewed patients who received services from a baccalaureate nurse employed in a family practice unit. Charter et al. (1975; *VON Newsletter*, 1976b) recorded a similar finding among 56 patients who received this type of service. On the other hand, Lees and Anderson (1971) found that patient acceptance of nurses, measured by 589 completed questionnaires, was somewhat qualified: patients were "more ready to accept the nurse in services which are technical in nature rather than those demanding judgment and decision" (p. 1166). Ames reported a high acceptance of the nurse by patients in the rural Beaverton Project (Ames, 1975; *VON Newsletter*, 1976a) as judged by the low rate of non-acceptors (3 of 400 patient appointments) during the study period.

In regard to patient acceptance, three studies (Jones, 1972; Kergin, Yoshida & Tidey, 1972; MacKay, Alexander & Kingsbury, 1973) pointed to the importance of public education regarding nurses' capabilities. Lees (1973b), in comparing British and Canadian patient acceptance, seems to support this view.

### *Professional Satisfaction*

Professional satisfaction was reportedly high in all but one (Greenhill & Grace, 1972) study considering it. At least two reports suggested a positive relationship between patient acceptance and physician acceptance of the nurse in this role (Jones, 1972; Spitzer & Kergin, 1973).

A study, based in two private group practices in Edmonton, undertook to determine the factors which facilitate or impede the process of integration of allied health personnel (public health nurses and social workers) in private medical practices (Laing, Greenhill & Fish, 1977). The investigators reported that over the 3-year study period nursing skills were under-utilized while, in contrast, social work skills were well used; this difference was attributed to the fact that the nurses posed professional, legal and remuneration problems to the participating doctors.

### *Quality of Care and Patient Outcomes*

Using a variety of measures, a number of investigators examined quality of care and the outcomes for patients following the introduction of the nursing role.

As a measure of the quality of care, the investigators in the Burlington trials appraised the adequacy of management of a series of ten indicator conditions defined as "a symptom, disease, state or injury which occurs

frequently in the type of practice under surveillance and in which the outcome can be affected favourably or adversely by the choice of treatment" (Spitzer, 1976, p. 218). Using methods developed and described by Sibley et al. (1975) the investigators rated the management of care as adequate, by standards determined by physician panels, for 66 per cent of episodes in the nurse practitioner group (Sweeny & Hay, 1973; Spitzer, 1976; Spitzer et al., 1974). Using similar indicator-condition methodology, Chambers et al. (1978) reported that standards of quality were maintained in the five Newfoundland practices under study after the introduction of the family practice nurse.

In addition to the indicator-condition strategy noted above, the Burlington trial (Sackett et al., 1974) and St. John's trial (Chambers & West, 1978b) measured physical function, emotional function and social function to evaluate the introduction of nursing. Both trials reported similar levels of function after one year of nursing care compared with conventional care. This led the investigators to conclude that health outcomes of care provided by nurses are favourable, and are comparable to those when physicians provide the care. The development and use of the measurement methods involved were described by Sackett et al. (1977).

The Burlington trials used patient mortality as one measure of outcome of the introduction of nursing into medical practice; there was no significant difference in mortality rates in the two groups, experimental and control (Sackett et al., 1974).

MacKay (1971) used illness rates as indicators of quality and found no significant difference in morbidity rates among the 72 families served by the nurse and 82 control group families.

Heaton and Flett (1971) reviewed 25 consecutive referrals to the community health nurse as to type of nursing service given and described the results of nursing intervention in terms of benefits to the patients: solution of problems related to medical treatment, assistance with obtaining various types of social aid, increased knowledge regarding disease and treatment.

Effect on patient compliance was used by Rosser and Flett (1971) to assess the value of community health nursing care. Although the sample was small, the writers suggested a significant role for community health nurses in influencing patient compliance with instructions on discharge from hospital. Hilditch, Jones, and Sutherland (1972) also examined the effect on patient compliance of increased nursing involvement in the care of 20 patients with long-term illness compared with 20 who received no such nursing care. The small sample size precluded the possibility of identifying differences in compliance between the group receiving nursing care and those receiving only medical care; however, the health needs identified by patients referred to the study suggested an important role for nursing in the care of patients with chronic disease (Jones, 1974).

Thibaudeau and Reidy (1977) carried out a comparative study of the impact on health behaviour of parents of 267 children receiving care for upper respiratory infection in three different primary care settings: emergency paediatric clinic of a general hospital, private general prac-

titioner office and local community service centre (CLSC). Further, they examined the extent to which nursing care influenced the impact of this primary care. Findings regarding knowledge of the child's illness, knowledge of the care required by the child and compliance with medical regimen indicate that those subjects who had received the experimental nursing care had significantly higher knowledge of diagnosis, causes and complications and were more compliant with the prescribed medical regimen.

Allen and associates have been comparing the practice of nursing in a variety of primary care settings for the purpose of demonstrating a particular model of nursing which differentiates between "situation-responsive" and "a priori" approaches (Allen, 1977; Allen & Gottlieb, 1978; Allen & Kravitz, 1974; Kravitz, 1978). The "situation-responsive" approach of nursing is seen to be complementary to functions of other health professionals and it is predicted that the outcomes of this approach will be more effective in assisting clients and families toward health-related goals. One measure of outcome is the client's perception of helpfulness with health-related problems. Although findings are not yet available, preliminary reports are promising and suggest that "situation-responsive" nursing is more helpful to clients than is "a priori" nursing (Allen, 1979, p. 58; Allen, Frasure-Smith & Gottlieb, 1980).

A study was reported as under way (*VON Newsletter* 1973; Premi & Milne, 1976) in which the Victorian Order of Nurses assigned a nurse to an urban family medical practice to give nursing in the homes of patients of the family practice unit. Under study will be the provision, planning and coordination of these services compared with those provided in the usual administrative structure in which patients are referred by multiple physicians. Included in the investigation is the effect on coordination and continuity of patient care as well as communication and financial implications.

## REPORTS FROM COMMUNITY NURSING SETTINGS

Although many of the projects discussed above involved community nurses, they were of a nature which placed them in medical care settings. However, a small number of reports were found which were based in community nursing settings. These latter reports are more recent (after 1976) suggesting a new interest in questions regarding nursing in community settings.

A project in Ottawa assigned public health nurses employed by a health unit to senior citizen housing units and, through a controlled study, examined the impact on level of health and hospital admissions of the residents (Flett, 1976; Flett & Last, 1978). Over a 3-year study period, 199 matched pairs of tenants with and without the services of a public health nurse were interviewed to obtain measures of physical health, emotional well-being and hospital admissions. The investigators reported an improvement in the study group's mobility and morale; and significantly

fewer of the study group were admitted to hospital in the second and third year of the study (Flett & Last, 1978).

Gibbon (1978, 1979) reported an investigation of the influence of nursing on the quality of life of frail elderly persons living at home. Quality-of-life components included activities of daily living, social contacts and morale. A sample of 200 persons 65 years and over with chronic illness was interviewed at 3 intervals in a 12-week period. Although 47 per cent of the patients demonstrated a reduction in ability to perform activities of daily living, morale showed a high degree of positive change, particularly in the areas of depression, zest for life, lonely dissatisfaction and attitude toward one's own aging. The investigator suggests that care "can bring about an improvement in the quality of life of patients whose general health status is not expected to improve" (Gibbon, 1979, p. 22).

Another setting under study by the McGill group (Allen, 1979), the Workshop in Montreal, was described by Schioler (1977). It provides nursing service directed toward long-term development and maintenance of family health and will examine the extent to which families are involved in learning to cope with life events (Allen, 1979).

Wilson (1975, 1976) has proposed a method of ongoing evaluation of public health nurse/physician liaison programmes in British Columbia. This would be based on measurement of five indicators: appropriateness, adequacy, effectiveness, efficiency and side effects.

## DISCUSSION

This array of literature results from projects which increased the volume of nursing or demonstrated innovative nursing roles, often in conjunction with physician services in the primary sector. Many of the reports emanated from general medical care settings and, to a large extent, focused attention on organization of professional services in these settings. This attention to general medical care differs somewhat from developments in the United States where a large literature regarding the nurse's role has emerged from specialized ambulatory medical care settings; exceptions have been the pioneering family health demonstration at New York's Montefiore Hospital by Silver (1956, 1963) and reports from general medical care in academic settings such as Yale (Beloff et al., 1968; Beloff & Weinerman, 1967; Beloff & Willet, 1968), Kansas (Lewis & Resnik, 1967; Lewis et al., 1969), Cornell (Reader & Schwartz, 1967; Wang, 1970; Wang & Brayton, 1970) and Wisconsin (Aradine & Hansen, 1970).

The interest in general medical care reflected in the Canadian literature is consistent with much of the concern about physician workload and consequent health care expenditures evident in a long series of official reports. Many such Ontario reports, for example, argued for greater assistance for physicians. Early reports referred to the physician assistant or practice nurse and recommended that demonstration models of service and education of such a worker be described and documented (Ontario, Committee on the Healing Arts, 1970, p. 209; Ontario Department of Health, 1970a, 1970b). In 1973 the Ontario Council of Health pub-

lished a review of the health care insurance program as it related to physician services (Ontario Council of Health, 1973); included was the recommendation "that the question of inclusion in medical practice in Ontario of nurse practitioners and other auxiliary personnel be viewed as an urgent matter" (p. 10). Two 1974 reports of the Council of Health predicted that, increasingly, nurse practitioners would be working in conjunction with physicians (Ontario Council of Health, 1974a, 1974b). This concept of nurse practitioner as physician extender was also implicit in the *Report of the Health Planning Task Force* (Ontario Ministry of Health, 1973a); the major thrust of its recommendations was on the development of the primary health care sector through primary care groups, based in physician services; and this perception of nurses' contribution continued in more recent Council publications (Ontario Council of Health, 1975, 1976). This concern for assistance for physicians also was clearly evident in a number of widely distributed bibliographies (Canada, 1970, pp. 97-168; Canadian Nurses Association, 1971, 1977; Ontario Department of Health, 1970a, pp. 44-48, 1970b, pp. 103-155; Todd, 1971).

A similar interest in general medical care is reflected in literature from Britain. However, at the same time, Britain has developed widespread arrangements which involve attachment to medical practices of local authority nursing staff. These developments have been summarized by Hawthorn (1971). This arrangement of services, i.e., assignment of agency-employed nurses to care for patients of specified physicians, has received some attention in Canadian literature (Ames, 1975; Day et al., 1969; Grassett, 1974; Greenhill & Grace, 1972; Heaton & Flett, 1971; Hilditch, Jones & Sutherland, 1972; Hutchison & Mumby, 1970; Jones, 1969, 1971; Laing, Greenhill & Fish, 1977; MacKay, Alexander & Kingsbury, 1972, 1973; Milne, Buchan & Williams, 1973; Rosser & Flett, 1971; Szasz, 1972). This pattern of organizing services has grown steadily, at least in Ontario: from 2 in 1969 (Day et al., 1969; Jones, 1969) to 93 in 1976 (Jones, 1976, 1977) and 115 in 1979. At a King's Fund Seminar, Mumby (1976) discussed attachment arrangements from the point of view of an administrator and identified advantages in terms of increased health team cooperation, patient and professional satisfaction. Disadvantages were identified in the areas of interpretation of public health nurse functions and budgetary restrictions on complements of nurses to meet demands.

With regard to the findings of this literature the variability in research approaches and methods makes comparison and generalization impossible. However, the findings do suggest some tentative observations regarding increased nursing in primary health care settings:

- Increased patient-focused activity by nurses employed in medical practices is possible.
- Patients appear to accept the increased nursing component.
- On the whole, professional colleagues accept the increased nursing component.
- Utilization of other health care services may be decreased.

Outcomes of care for patients has not been addressed to a significant extent.

Regarding quality of care and financial outcome the findings are qualified. Compared to most other reports, which have relied on small samples or single case studies, the McMaster studies (including the Burlington and the Southern Ontario Trials) summarized by Spitzer (1976) and the Memorial University studies (including the St. John's and the Newfoundland Trials) have included large samples and a multiplicity of sophisticated approaches to evaluation. The resulting contribution to health services research literature is impressive. Some of the major results of these studies are also impressive and appealing: employment of nurses in medical practice without loss of financial return and without loss of quality of care. However, these two major findings are open to some question. Early findings of cost savings for physicians (Spitzer et al., 1973) have been reversed by more recent findings (Chambers, 1979; Spitzer, 1976; Spitzer, Hackett & Russell, 1974) which show that financial returns of medical practices decline following the employment of nurses. As to quality of care, on the basis of the findings from the McMaster and Memorial studies, the best that can be said is that the quality of care provided by medical practices employing nurses is as good as that provided by medical practices without nurses. Important as this finding is, the strategies and measures applied cannot provide information regarding the influence which the introduction of nurses may have had on changing the quality of care received by patients. Garner (1977) has raised questions regarding the assumptions underlying the statistical manipulations applied in the Burlington Trials (Sackett et al., 1974; Spitzer et al., 1974) and the resulting difficulties in interpreting the findings. The McMaster and Memorial studies have been remarkably influential in the development of the nurse practitioner as a "physician extender" (Chambers, 1979; Spitzer, 1976) or "mid-level" health professional (Chambers & West, 1978a).

With the apparent consensus in official recommendations and at the same time influential findings from well planned research, one might have predicted widespread development and employment of nurse practitioners as physician extenders. But to date, at least in Ontario, this has not happened: according to the Nurse Practitioner Association of Ontario (*Nursing 78*, p. 53) in 1978 there were 93 of its members practising in Ontario in contrast to a requirement for 335 a year predicted five years earlier (Ontario Ministry of Health, 1973b). It is suggested that a major deterrent to the development of nursing roles may be the dichotomy of perception of the ways in which nursing can contribute to the well-being of the population. As early as 1972 the Committee on Nurse Practitioners (Canada, Department of National Health and Welfare, 1972) reported that two differing perceptions emerged in committee discussions: an expanded "role for nurses as nurses" and, alternatively, "to assist physicians in carrying out *their* functions" (p. 2). This review of literature suggests that these differing perceptions continue to persist. Those investigations which have had the greatest impact have examined the role of

“physician extender” rather than the “role for nurses as nurses”; criteria used for measuring quality have been those of medical care, which are inappropriate for examining nursing care.

Chaska, in exploring the future of nursing practice, has captured these differing perceptions of the nurse practitioner:

Three schools of thought exist. The first is to develop the role of the nurse practitioner in primary care as a lower-level practitioner of medicine. The second is to combine medical activities, such as physical examinations, with nursing assessment and teaching. The third is to concentrate on the primary role and definition of Nursing (Chaska, 1978, p.422).

She asks, “Will the profession develop with a unique service to offer, or will it compromise and attempt to fill the need for increased medical services and to alleviate medical shortages” (p. 422).

If nurses choose to answer Chaska’s question by offering “a unique service” we must accept that such a role is broad and complex in the primary health care sector (Jones & Parker, 1974), as elsewhere. Such a role involves “an individual who is capable of independent clinical decisions based on clinical data gathered by himself/herself during first patient contact” (Ontario Council of Health, 1976, p. 25). Such a role puts very much in question the assumption that physicians should be expected to bear responsibility for identifying and referring all needs for nursing care among their patients, an assumption underlying many of the reports reviewed.

What is now needed is examination of the “role for nurses as nurses” (Canada, Department of National Health and Welfare, 1972, p. 2) using well-designed research based on concepts of nursing as caring which assists people with health-seeking behaviours and with their responses to actual or potential threats to health. Also urgently needed is investigation of the influence of such nursing care on the health of patients and clients. Difficult as this is, increasing numbers of instruments and methods are being developed and refined. For example, this literature included reports from nurse investigators (Flett, 1976; Gibbon, 1978) which hold promise in that they have selected measures of patient outcomes which are more consistent with nursing’s goals and care activities than others reported in the literature reviewed; however, they do not clearly define the intervention related to the reported outcomes. Thibaudeau and Reidy (1977), as well as measuring outcomes of nursing care, have described the planned and systematic nursing intervention aimed at increasing the self-care abilities of the parents in the experimental groups. Allen and associates (Allen, 1977; Allen & Kravitz, 1974; Kravitz, 1978) propose to describe the nursing care in a variety of primary health care settings and to evaluate its effect on health-related client behaviour. One would anticipate that such studies will result in increased understanding of the differences between what Allen (1977) describes as complementary functions (“the role for nurses as nurses”) and replacement functions (“the physician-extender”).

The primary health care sector as envisioned in Figure 1 is a large one in which exist many challenges for promotion and maintenance of health. Nurses, who place high value on assisting people with maximizing their health potential, seem especially suited to the goals of health promotion (Lalonde, 1974). These observations are reflected in the report of the 1979 review of the state of health services in Canada (Hall, 1980, pp. 72-78) which states that "the plea for a greater utilization of nurses and nursing skills is amply justified" (p. 71). However, until research arising out of nursing concepts and examining patient/client outcomes of nursing care can be developed, implemented and reported it is likely that nursing roles in primary health care will continue to be ambiguous and nursing's potential for contributing to Canada's health will remain unfulfilled.

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